

NOTES ON THE DASYMUTILLA OF THE PALO VERDE
VALLEY, CALIFORNIA
WITH THE DESCRIPTION OF A NEW SPECIES
(Hymenoptera, Mutillidae)

BY WILLIAM F. BARR AND PAUL D. HURD, JR.

University of California, Berkeley

The Palo Verde Valley, a narrow strip of river bottom about thirty miles long lying adjacent to the Colorado River in eastern Riverside County, California, is bounded by mountains and a mesa to the north, south and west, and by the Colorado River to the east. It has a considerable acreage of cultivated areas although the greater portion of the valley consists of mesquite, tamarisk and arrow-weed thickets. Thus the valley offers a splendid opportunity for collecting a varied population of *Dasymutilla* in large numbers.

During the writers' investigations of alfalfa problems in this valley in the summer of 1946 they acquired a collection of *Dasymutilla* that consists of nine species, one of which is described as new.

Collections were also made by E. G. Linsley, J. W. MacSwain, and R. F. Smith during the summers of 1945 and 1946 and the writers wish to thank these individuals for the use of their material and data.

All localities and dates of capture for each species have been listed since they may prove to be of assistance to future workers in correlating males and females which have been described as separate species.

DASYMUTILLA EMINENTIA MICKEL

Dasymutilla eminentia Mickel, 1928, U. S. Nat. Museum Bull., 143:79.

The capture of six specimens establishes the record of this species for the first time in California. It was taken at the following localities in the Palo Verde Valley: Blythe, 1 ♀, June 22, 1946 (Barr); 1 ♂, July 14, 1945 (MacSwain); 1 ♂, 1 ♀, August 9, 1946 (Barr and Hurd); 1 ♀, August 20, 1946 (Hurd). Ripley, 1 ♂, August 28, 1946 (Hurd).

One male was taken while sweeping alfalfa.

DASYMUTILLA ATRICAUDA MICKEL

Dasymutilla atricauda Mickel, 1936, Pan-Pac. Ent., 12(2):92.

This species was described from Blythe by Mickel, additional specimens are now recorded from the type locality as follows: Blythe, 1 ♀, June 25, 1945 (Linsley); 1 ♀, August 9, 1946 (Barr); 2 ♀♀, August 13, 1946 (Barr and Hurd).

DASYMUTILLA MAGNA (CRESSON)

Mutilla magna Cresson, 1865, Proc. Ent. Soc. Phila., 4:385.

This well-known species was found to be rather common throughout the valley. One male was taken while sweeping alfalfa at Blythe on July 19, 1946. Previously the only California record of this species was from Brawley, Imperial County. New California records are as follows: Seven miles north of Blythe, 1 ♂, July 23, 1946 (Barr and Hurd). Blythe, 1 ♀, June 22, 1945 (Linsley); 2 ♀♀, June 22, 1946 (Barr); 1 ♀, June 23, 1945 (Linsley); 1 ♀, June 25, 1945 (Linsley); 1 ♂, 1 ♀, July 11, 1946 (Barr); 1 ♀, July 13, 1946 (Barr); 1 ♀, July 14, 1946 (MacSwain); 1 ♂, July 19, 1946 (Barr); 1 ♀, July 21, 1946 (Hurd and Smith); 1 ♀, July 26, 1946 (Barr and Hurd); 1 ♀, August 3, 1946 (Hurd); 1 ♂, August 7, 1946 (Barr); 1 ♀, August 9, 1946 (Barr). Ripley, 1 ♀, July 24, 1946 (Barr and Hurd).

DASYMUTILLA MAGNIFICA MICKEL

Dasymutilla magnifica Mickel, 1928, U. S. Nat. Museum Bull., 143:234.

Three females of this beautiful species were taken at the following localities: eight miles north of Blythe, June 26, 1946 (Barr) and Palo Verde, August 22, 1946 (Barr and Hurd), August 27, 1946 (Barr).

In one of the specimens from Palo Verde, the dorsal abdominal vestiture is quite worn and short and is of an orange color instead of red; however, it may be readily identified by the characters as given in Mickel's key.

DASYMUTILLA SATANAS MICKEL

Dasymutilla satanas Mickel, 1928, U. S. Nat. Museum Bull., 143:239.

Dasymutilla mimula Mickel, 1928, U. S. Nat. Museum Bull., 143:255; 1936, Pan-Pac. Ent., 12(2):94. *New synonymy*.

The male and female of this species were described by Mickel

in 1928 as separate species. In early August it was the writers' fortune to collect a copulating pair of the male (*mimula*) and the female (*satanas*) thereby establishing the correct status of the species as indicated in the synonymy above. The writers had suspected that such would be the case since the above males and females were the most commonly encountered *Dasymutilla* during the past summer.

The males were found to be common in the cultivated parts of the valley and were frequently captured in the alfalfa fields. The females, as in the case of the males, were most commonly observed in the cultivated areas of the valley, but were apparently restricted to the roads and roadside situations.

Mickel in 1936 records ten males from Blythe, additional localities and records from the Palo Verde Valley are: seven miles north of Blythe, 5 ♂♂, 3 ♀♀, July 23, 1946 (Barr and Hurd). Blythe, 1 ♂, June 22, 1946 (Barr); 1 ♂, July 11, 1946 (Barr); 3 ♂♂, July 11, 1946 (Barr); 3 ♂♂, July 13, 1946 (Barr); 2 ♂♂, 1 ♀, July 14, 1945 (MacSwain); 1 ♀, July 19, 1946 (Barr); 3 ♂♂, 1 ♀, July 21, 1946 (Barr and Hurd); 1 ♂, July 26, 1946 (Barr and Hurd); 2 ♂♂, July 27, 1946 (Barr and Hurd); 1 ♂, 1 ♀, August 1, 1946 (Barr and Hurd); 1 ♂, 7 ♀♀, August 3, 1946 (Barr and Hurd); 1 ♀, August 4, 1946 (Barr); 3 ♀♀, August 5, 1945 (MacSwain and Smith); 2 ♂♂, August 6, 1946 (Barr); 1 ♂, August 7, 1946 (Barr and Hurd); 1 ♀, August 9, 1946 (Hurd); 1 ♂, August 17, 1946 (Hurd); 4 ♀♀, August 19, 1946 (MacSwain); 2 ♂♂, 1 ♀, August 20, 1946 (Barr and Hurd); 1 ♀, August 22, 1946 (Barr). Ripley, 1 ♀, June 25, 1946 (Barr); 1 ♂, 1 ♀, July 2, 1946 (Barr); 1 ♂, 2 ♀♀, July 14, 1946 (Barr and Hurd); 1 ♂, 1 ♀, August 12, 1946 (Barr and Hurd); 7 ♂♂, 1 ♀, August 16, 1946 (Barr and Hurd); 3 ♀♀, August 28, 1946 (Barr and Hurd). Palo Verde, 1 ♀, August 20, 1946 (Barr).

DASYMUTILLA GLORIOSA (SAUSSURE)

Mutilla gloriosa Saussure, 1867, Ann. Soc. Ent. Fr., (4) 7:359.

This distinctive xerophilic species was uncommonly encountered during the summers of 1945 and 1946. It appeared most abundantly toward the end of this past summer.

The Palo Verde Valley records include: seven miles north of Blythe, 1 ♀, July 23, 1946 (Barr). Blythe, 1 ♀, June 24, 1945

(Linsley); 1 ♀, July 21, 1946 (Barr). Ripley, 1 ♀, August 19, 1946 (Barr); 2 ♀♀, August 28, 1946 (Hurd). Palo Verde, 1 ♀, August 10, 1946 (MacSwain).

DASYMUTILLA HELIOPHILA (COCKERELL)

Sphaerophthalma heliophila Cockerell, 1900, Entomologist, 33:65.

This species was not taken by the writers, its occurrence in the Palo Verde Valley is based on the record of Mickel¹ of specimens taken at Blythe.

DASYMUTILLA ARENIVAGA MICKEL

Dasymutilla arenivaga Mickel, 1928, U. S. Nat. Museum Bull., 143:278.

Arenivaga was quite commonly collected throughout the Palo Verde Valley at the following localities: seven miles north of Blythe, 1 ♀, July 23, 1946 (Barr and Hurd). Blythe, 1 ♀, June 24, 1945 (Linsley); 1 ♀, June 25, 1945 (Linsley); 1 ♀, July 13, 1946 (Barr); 2 ♀♀, August 3, 1946 (Barr and Hurd); 1 ♀, August 4, 1946 (Hurd); 1 ♀, August 5, 1945 (Smith and MacSwain); 2 ♀♀, August 9, 1946 (Barr and Hurd); 1 ♀, August 20, 1946 (MacSwain); 1 ♀, August 22, 1946 (Barr); 4 ♀♀, August 27, 1946 (Barr and Hurd); 1 ♀, August 28, 1946 (Barr). Ripley, 1 ♀, August 14, 1946 (Barr); 2 ♀♀, August 28, 1946 (Hurd). Palo Verde, 1 ♀, August 27, 1946 (Hurd); 1 ♀, August 31, 1946 (MacSwain).

Dasymutilla paranocturna Barr and Hurd, new species

Female. Length 9 mm. Dark mahogany red, eyes enlarged; vertex, dorsum of thorax and second abdominal tergite rather sparsely clothed with erect and recumbent, rather long, ashy-white pubescence; frontal area of head clothed with recumbent sienna pubescence; abdominal segments 3-5 densely clothed with erect, burnt umber pubescence; remainder of insect clothed as abdominal segments 3-5, but pubescence sparser.

Head very dark mahogany red, mandibles weakly unidentate, acuminate at apex, basal half dark mahogany red, apical half black, clothed exteriorly with a few, short burnt umber hairs; clypeus bidentate medially on apical surface, clothed with a thick fringe of rather short burnt umber hairs; antennae dark mahogany red, scape clothed with numerous, minute burnt umber hairs,

¹ C. E. Mickel, 1936, Pan-Pac. Ent., 12(2):94.

first segment of flagellum slightly shorter than twice its own width at apex; antennal scrobes distinctly carinate above, the carina extending nearly to the inner eye margin; eyes prominent, unusually large, the distance between the posterior margin of the eye and the postero-lateral angles of the head not greater than one-half diameter of eye; front and vertex with rather large, confluent shallow punctures; gena sparsely punctured with small non-confluent punctures; frontal area of head densely clothed with recumbent sienna pubescence; vertex sparsely clothed with a few, ashy-white recumbent hairs. *Thorax* dark mahogany red, slightly broader than long; dorsum sculptured with quite large, shallow confluent punctures, sparsely clothed with erect and recumbent ashy-white pubescence; scutellar scale evident; propleuron with large irregular punctures, clothed with a few, short, erect burnt umber hairs; anterior half of mesopleuron nearly glabrous, bounded caudally by a dorso-ventral fringe of very long burnt umber hairs; posterior half of mesopleuron with coarse, irregular and somewhat scattered punctures; dorsal surface, sides, and posterior surface of propodeum sculptured with rather large confluent punctures, dorsal surface clothed rather sparsely with mostly erect, rather long ashy-white hairs, some of which are tinged with yellow; legs dark mahogany red, clothed with erect burnt umber hairs. *Abdomen* dark mahogany red, first tergite glabrous except at apical and lateral margins where bordered by a row of small, confluent circular punctures, apex clothed with transverse row of short, erect sienna hairs, sides sparsely clothed with a few, erect rather long hairs; second tergite densely sculptured with confluent punctures, sparsely clothed with erect and recumbent ashy-white hairs, except at apex and sides where glabrous; tergites 3-5 densely clothed at bases with erect burnt umber pubescence; second sternite sculptured with rather small non-confluent punctures which are more or less transversely arranged, sparsely clothed with a few, short burnt umber hairs; remaining sternites similarly clothed as the corresponding tergites; pygidium distinctly longitudinally rugose.

Holotype, ♀, (No. 5619, California Academy of Sciences, Entomology) from BLYTHE, RIVERSIDE COUNTY, CALIFORNIA, July 6, 1946, collected by W. F. Barr. One paratype, ♀, from SAN FELIPE CREEK, IMPERIAL COUNTY, CALIFORNIA, June 17, 1940, collected by R. G. Dahl.

D. paranocturna is known only from two female specimens and structurally appears to be most closely related to *D. nocturna* Mickel and runs to that species in Mickel's key². It differs from *nocturna* by possessing shorter, ashy-white and burnt umber

²Mickel, C. E., 1936. New species and records of nearctic mutillid wasps of the genus *Dasymutilla*. Ann. Ent. Soc. Amer., 29:29-35.

pubescence on the dorsal surfaces instead of the long, contrasting black and white pubescence. *Paranocturna* further differs in that the coloration of the integument is distinctly reddish, not tending toward black as does *nocturna*.

The paratype of this species is somewhat larger than the holotype, measuring 14 mm. in length.

DASYMUTILLA MEGALOPHTHALMA MICKEL

Dasymutilla megalophtalma Mickel, 1928, U. S. Nat. Museum Bull., 143:282; 1936, Ann. Ent. Soc. Amer., 29(1):60.

Megalophtalma was not commonly encountered in either year. In 1945, E. G. Linsley collected a male at Blythe on June 24 and R. F. Smith and J. W. MacSwain collected another male on August 5 at the same locality.

The writers collected but two males, one of which was taken in an alfalfa field at Blythe on August 7, the other was collected at Ripley on August 14.

INTERNATIONAL CONGRESS OF ENTOMOLOGY

The eighth International Congress of Entomology will be held in Stockholm, Sweden, August 9-15, 1948. The fact that all steamship sailings are currently booked to capacity for months in advance makes it seem necessary for those expecting to attend the congress in 1948 to arrange for passage as early as possible. Steamship companies have not issued sailing lists for 1948, but expect to do so in the early fall. A number of lines have listed sailings for the present season, among them, the Cunard, French, Belgian, Swedish, Norwegian, Gdynia (Polish), Holland-American, etc., the first mentioned expecting soon to have two new steamers in service. It is understood that the Thirteenth International Congress of Zoology will be held in Paris some time in July, 1948, and it is hoped that all entomologists going to Stockholm will plan to attend the Zoological Congress also in order that the interests of the entomologists may be fully represented before the more comprehensive body. Should a sufficient number of individuals indicate that they expect to sail about mid June, it may be feasible to engage passage on the same steamer. Early information as to the probable number of participants is especially desired in order that the housing committee in Stockholm may make the necessary arrangements. The undersigned, as member of the executive committee, would appreciate it if he be kept informed as early as possible as to plans of those expecting to attend the sessions.—
O. A. JOHANNSEN, *Cornell University, Ithaca, N. Y.*